

**REMARKS**

Claims 1-26 are presently pending in this application. Claims 1, 7, 12, 17, 19, and 23 have been amended. No new matter has been added. Favorable reconsideration and allowance of the pending claims are respectfully requested.

**35 U.S.C. § 102 Rejection**

In the Office Action, claims 1-5, 7-10, and 12-16 were rejected under 35 U.S.C. § 102(e) as being anticipated by United States Patent Application 2002/0097885 to Birchfield et al. ("Birchfield"). Applicant respectfully traverses the rejection, and requests reconsideration and withdrawal of the § 102(e) rejection.

The Office Action alleges that "Birchfield discloses "an acoustic source localization system and method comprising a first microphone (302A; Figure 3) located at a first location to detect acoustic waves at the first location; a second microphone (302B; Figure 3) located at a second location to detect acoustic waves at the second location; at least one acoustically reflective surface to reflect the acoustic waves (paragraph 0038); an acoustic analysis device to detect and analyze acoustic waves (330. paragraph 0039; Figure 3); a processing device to determine a spatial location of a source of the acoustic waves (340; paragraph 0042)."

Birchfield, at paragraph 0038, states:

In some applications it is desirable to determine the direction to a human speaker. Consequently, in one embodiment a speech detection module 320 is used to select only sounds corresponding to human speech for analysis. For example, speech detection module 320 may use any known technique to analyze the characteristics of acoustic signals and compare them with a model of human

speech characteristics to select only human speech for analysis under the present invention.

The Office Action further alleges that “A human has ears, and the ears read on at least one acoustically reflective surface having an irregular shape.”

While Applicant disagrees with the broad grounds of rejection presented in the Office Action, Applicant has amended the independent claims in order to expedite prosecution on the merits. In particular, independent claim 1 has been amended to recite “at least one reflector having an acoustically reflective surface structured and arranged to reflect the acoustic waves.” Independent claim 7 has been amended to recite “using at least one reflector having an acoustically reflective surface structured and arranged to reflect the acoustic waves in a direction of the first location and the second location.” Independent claim 12 has been amended to recite “acoustic waves received from a reflector structured and arranged to reflect the acoustic waves in a direction of the first microphone and the second microphone.”

With respect to claims 1, 7, and 12, Birchfield clearly fails to teach, among other things, a reflector structured and arranged to reflect acoustic waves. Consequently, each of claims 1, 7, and 12 recites a combination of features which is neither taught nor suggested by Birchfield. Applicant reminds the Examiner that in order to anticipate a claim under 35 U.S.C. § 102, the cited reference must teach every element of the claim. *See* MPEP § 2131, for example.

Applicant does not otherwise concede, however, the correctness of the Office Action’s rejection with respect to any of the dependent claims discussed above. Accordingly, Applicant hereby reserves the right to make additional arguments as may be

necessary to further distinguish the dependent claims from the cited references, taken alone or in combination, based on additional features contained in the dependent claims that were not discussed above. A detailed discussion of these differences is believed to be unnecessary at this time in view of the basic differences in the independent claims pointed out above.

For at least the reasons set forth above, Applicant submits that independent claims 1, 7, and 12 are allowable and that dependent claims 2-4, 8-10, and 13-16 are allowable by virtue of their dependency from allowable independent claims, as well as on their own merits.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 102(e) rejection of claims 1-5, 7-10, and 12-16.

### **35 U.S.C. § 103 Rejections**

In the Office Action, claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Birchfield, and claims 6, 11, and 18-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Birchfield in view of United States Patent Number 6,014,510 to Burks et al. ("Burks"). Applicant respectfully traverses these rejections, and requests reconsideration and withdrawal of the § 103(a) rejections.

According to MPEP § 2143, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference (or references when

combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

As set forth above, Birchfield fails to teach, among other things, a reflector structured and arranged to reflect acoustic waves, with respect to amended independent claims 1, 7, and 12.

Regarding claim 17, Birchfield fails to teach or suggest all of the features of independent claim 12 and thus is insufficient to establish a *prima facie* case of obviousness. Applicant reminds the Examiner that if an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. See MPEP § 2143.03, for example. Applicant submits that claim 17 is allowable for at least this reason.

In the Office Action, Burks was relied upon as disclosing “the concept of creating a phase table having a period for each phase with its associated phase tag (column 5, lines 24-33).”

With respect to claims 6, 11, and 18, Burks clearly fails to teach, among other things, a reflector structured and arranged to reflect acoustic waves. As such, Burks cannot remedy the deficiencies of Birchfield with respect to amended independent claims 7 and 12. Even if Birchfield could be combined with Burks, which Applicant does not admit, such combination fails to teach or suggest all of the features of independent claims 7 and 12 and thus is insufficient to establish a *prima facie* case of obviousness with

respect to the independent claims. Applicant submits that claims 6, 11, and 18 are allowable, therefore, by virtue of their dependency as well as on their own merits.

While Applicant disagrees with the grounds of rejection presented in the Office Action with respect to claims 19-26, Applicant has amended the independent claims in order to expedite prosecution on the merits. In particular, independent claim 19 has been amended to recite “associating phase angles with the known frequencies at each of the predetermined spatial locations, wherein variation between associated phase angles and predetermined phase angles for the known frequencies is indicative of a predetermined spatial location.” Independent claim 23 has been amended to recite “associate the phase angles with the known frequencies at each of the predetermined spatial locations, wherein variation between associated phase angles and predetermined phase angles for the known frequencies is indicative of a predetermined spatial location.”

Applicant submits that neither Birchfield nor Burks teaches, among other things, variation between associated phase angles and predetermined phase angles for known frequencies being indicative of a predetermined spatial location. Even if Birchfield could be combined with Burks, which Applicant does not admit, such combination fails to teach or suggest all of the features of independent claims 19 and 23 and thus is insufficient to establish a *prima facie* case of obviousness with respect to the independent claims. Moreover, Applicant submits that there is no motivation to combine the teaching of Birchfield with Burks and that there is no reasonable expectation of success to make such combination.

For at least the reasons set forth above, Applicant submits that the amended independent claims are non-obvious and represent patentable subject matter in view of

the cited references, whether taken alone or in combination. Applicant reminds the Examiner that if an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103(a) rejection of claims 17 and the § 103(a) rejection of claims 6-11, and 18-26.

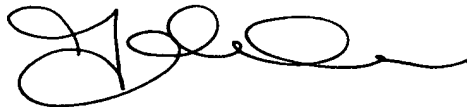
Applicant submits that the application is in condition for allowance. Favorable reconsideration and allowance of the pending claims are respectfully requested.

The Examiner is invited to contact the undersigned at 724-933-3387 to discuss any matter concerning this application.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 02-2666.

Respectfully submitted,

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Under 37 CFR 1.34(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to:  
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Deborah Higham

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1-10-05  
Date

Dated: January 10, 2005

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<sup>1</sup> Without the benefit of the Office's reasoning as to the motivation to combine the cited references, Applicant is unable to analyze the merits of the Office's reasoning.

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